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ONTARIO WATER RESOURCES COMMISSION

REPORT ON A

WATER POLLUTION SURVEY

OF THE

VILLAGE OF VICTORIA HARBOUR

OCT. 6, 1964.



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ONTARIO WATER RESOURCES COMMISSION

INTRODUCTION

A water pollution survey was conducted at the Village of Victoria Harbour on October 6, 1964. This investigation was made as the result of a report from officials of the Sanitation Department of the Liquor Control Board of Ontario concerning the discharge of inadequately treated wastes to a watercourse.

The following persons were interviewed at the time of this investigation:

Mr.D.Eplett, Clerk-Treasurer, Village of
Victoria Harbour
Mr.I.Millar, Foreman, Village of Victoria
Harbour
Mr.D.Morrow, Public Health Inspector,
Simcoe County Health Unit.

GENERAL

The Village of Victoria Harbour with a population of 1047 is located on Highway No.12 about 8 miles south-east of Midland.

WATER SUPPLY

Water is presently obtained from Hog Bay which is part of Georgian Bay. The supply is chlorinated for disinfection purposes and pumped directly into the water distribution system.

A new water works is proposed north of the village in the Crystal Beach area.

The water in this area serves as both a source of domestic supply and for recreational purposes for the large summer season tourist influx.

WATER POLLUTION

The sources of pollution gaining access to surface waters in the area are of both a sanitary and an industrial nature.

SANITARY WASTE DISPOSAL

It was reported that individual septic tank and tile field disposal systems are employed for the disposal of sanitary wastes.

Investigation of storm sewers and open ditches draining the village revealed evidence of domestic wastes gaining access to these drains. Septic tank wastes from a premises on the corner of John and Martha Streets were observed discharging to the road ditch and finally to the Martha Street storm ditch. Drainage from the Victoria Harbour area is directed to Georgian Bay.

FOUR SEASONS MOTEL .

Waste disposal for the 20-unit Four Seasons Motel which is located south of Ellen Street consists of a two compartment 900-gallon septic tank from which wastes are pumped to a tile field containing 3300 feet of tile. Reportedly, this system had recently overflowed from a distribution box to the Ellen Street drainage ditch. However, the malfunction was corrected prior to this investigation.

INDUSTRIAL WASTES

Victoria Harbour Dairy

The Victoria Harbour Dairy, located on the east side of William Street is owned and operated by Mr.C.Mackenzie & Son.

Approximately 900 gallons of milk are processed three days a week in the winter months. Operations increase to six days a week during July and August.

Water is obtained from the municipality and the supply is not metered.

Dairy wastes are discharged through a four-inch tile drain to the village storm sewer which drains to Georgian Bay. These wastes consist of cooling water and wash water used to cleanse dairy equipment such as a bulk tank, a HTST pasteurization unit and a homogenizer. Mr. Mackenzie reported that "in place" cleaning of equipment resulted in the use of wash water containing 300 ppm chlorine concentration. This no doubt explains the absence of coliform organisms in the samples collected of the dairy wastes. However, the biochemical oxygen demand of 660 indicates the high organic content of the wastes.

Sanitary wastes from a washroom and the dairy bar wastes are discharged to a septic tank and tile field.

SAMPLING PROCEDURE

Samples were collected for bacteriological examination and chemical analyses. The location of sampling points are indicated on a map appended to this report. A description of these sampling points is contained in the following list.

Sample Number

Location & Remarks

G-1	Georgian Bay - sampled 450 ft. from shore - 2 ft. below surface in the area of the proposed water works intake - a strong north wind created rough conditions in the bay.
G-2	Georgian Bay - sampled 300 ft. from shore - 1 ft. below surface in area of existing water works intake.
GH-1	Hog River at Georgian Bay - wind from north prevented flow determination.
GV-1	Drainage ditch - adjacent to Four Seasons Motel at Georgian Bay - estimated flow 3 gpm - no apparent discharge from motel tile field.
GV-2	Storm sewer - William St. from catch basin opposite Victoria Harbour Dairy - flow - dairy waste only 3 gpm - no discharge to William St. storm sewer from Albert and Martha Streets.
GV-3	Storm sewer - catch basin corner of Albert and John Streets - estimated combined flow from Albert and John Street storm sewer was 0.5 gpm - no flow noted in catch basins at corner of Albert and William Streets.

LABORATORY ANALYSIS

The results of laboratory analyses of samples collected are appended to this report.

The analyses of samples collected from Georgian Bay and Hog River during this investigation indicated these areas to be satisfactory for recreational purposes and as a source of domestic supply when chlorinated.

Water samples were collected for bacteriological examination by the staff of the Simcoe County Health Unit in the Victoria Harbour area on July 29, 1964. The results of samples collected from the Victoria Harbour storm sewer system were consistently high with most probable number (MPN) total coliform organism counts of 240,000 and E.coli concentrations ranging from 24,000 to 240,000. Samples collected in the Hog Bay area at that time had considerably higher bacteriological concentrations than did the samples collected in October.

SUMMARY & CONCLUSIONS

The Victoria Harbour storm sewer drainage system discharges to Georgian Bay via an open ditch east of the Four Seasons Motel. A malfunction, permitting the discharge of contaminating wastes from the disposal system serving this motel to the drainage ditch, had been corrected prior to this investigation.

Investigation of the village area and results of laboratory analysis of samples collected revealed that domestic and industrial wastes are gaining access to this storm sewer and in turn to Georgian Bay. The discharge of polluting material to any surface water is contrary to The Ontario Water Resources Commission Act, and should be discontinued.

The quality of the wastes emanating from the village storm sewers is the responsibility of the municipality. Correction

of these conditions may be achieved in certain instances by severing connections to the storm sewers and by individual correction of malfunctioning systems under the supervision of the local public health authorities.

There are areas within the village where proper sewage treatment on an individual basis would be difficult such as the vicinity of the Victoria Harbour Dairy. Thus, consideration should be given to providing a municipal sewage system. It is realized that this municipality is presently burdened with the cost of water works extensions. However, it is suggested that a preliminary engineering report on a municipal sewage system be prepared by a consulting engineer. Perhaps such a system could be staged with first attention given to those areas of the village where waste disposal on an individual basis is not possible.

RECOMMENDATIONS

1. The practice of discharging inadequately treated wastes to the storm sewers and drainage ditches should be discontinued.
2. Satisfactory septic tank and tile bed disposal systems should be installed by the offenders under the supervision of the Simcoe County Health Unit.

3. If adequate treatment cannot be achieved on an individual basis then a consulting engineer should be engaged to prepare a preliminary engineering report on a municipal sewage system to serve those areas where individual septic tank systems are not feasible.

All of which is respectfully submitted,

District Engineer:


H. Browne

Approved by:


K.H. Sharpe, Director

Prepared by: W.C. Stevens

ds

MUNICIPALITY: Victoria Harbour

REPORT TO: W.C.Stevens
DATE SAMPLED: October 6,1964

WATERCOURSE: Georgian Bay

RIVER SURVEY

Lab. No.	5-day BOD	Total	Solids Susp.	Diss.
R-4470	1.8	114	8	106
R-4471	1.5	132	4	128
R-4472	1.5	250	4	246
R-4473	4.0	388	14	174
R-4474	660	1022	254	768
R-4475	7.2	816	21	795

BACTERIOLOGICAL EXAMINATION

Lab. No.	Membrane Filter Coliforms per 100 ml
R-17777	30
R-17778	30
R-17779	140
S-17780	930,000
S-17781	0
S-17782	11,300,000

Sample
Point No.

R-4470	G-1	Georgian Bay - proposed water works intake - 450 ft. from shore
R-4471	G-2	Victoria Harbour - water works intake - 300 ft. from shore
R-4472	GH-1	Hog River at Georgian Bay
R-4473	GV-1	Stream - adjacent to Four Seasons Motel at Georgian Bay
R-4474	GV-2	Storm sewer - catch basin opposite Victoria Harbour Dairy- William St.
R-4475	GV-3	Storm sewer - catch basin - corner of Albert & John Streets

WATER ANALYSIS

Lab.. No.	Alkalinity as CaCO ₃	Iron as Fe	Chloride as Cl	pH at lab.	BACTERIOLOGICAL EXAMINATION Lab. No.	Membrane Filter Coliforms/100 ml.
W-6336	68	0.30	8	7.5	W-17783	0

Victoria Harbour municipal water supply - treated

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